

WHAT IS CLAIMED IS:

1. A method of one of directly and indirectly applying a coating medium onto a moving fiber material web, said method comprising the steps of:

providing a spray device having an application area;

5 spraying the coating medium with said spray device to thereby atomize the coating medium; and

maintaining an atmosphere of at least one of a back-moistening medium and a moistening medium for the atomized coating medium in said application area of said spray device.

2. The method claim 1, wherein said at least one of a back-moistening medium and a moistening medium comprises a vapor of a liquid, said vapor being one of liquid and viscous before said spraying step, said vapor being configured for acting as a carrier liquid for the coating medium.

3. The method of claim 2, wherein said vapor comprises water vapor.

4. The method of claim 3, wherein said spraying step includes utilizing said at least one of a back-moistening medium and a moistening medium.

5. The method of claim 4, wherein said spray device comprises a two-substance spray device.

6. The method of claim 5, wherein said two-substance spray device comprises an internal mixing two-substance spray device.

7. The method of claim 5, wherein said two-substance spray device comprises an external mixing two-substance spray device.

8. The method of claim 3, wherein said spray device comprises a rotary spray device.

9. The method of claim 8, comprising the further step of using said at least one of a back-moistening medium and a moistening medium to supply the atomized coating medium to a moving surface.

10. The method of claim 8, comprising the further step of utilizing electrostatic force to bring the atomized coating medium to a moving surface.

11. The method of claim 10, comprising the further step of supplying said at least one of a back-moistening medium and a moistening medium to the atomized coating medium.

12. The method of claim 11, wherein the moving surface carries an air boundary layer, said method comprising the further step of using said at least one of a back-moistening medium and a moistening medium to remove the air boundary layer from the moving surface before the air boundary layer reaches said application area of said spray device.

13. An apparatus for one of directly and indirectly applying a coating medium onto a moving fiber material web, said apparatus comprising:

a spray device having an application area, said spray device being configured for atomizing the coating medium; and

a vapor supply device configured for maintaining an atmosphere of at least one of a back-moistening medium and a moistening medium for the atomized coating medium in said application area of said spray device.

14. The apparatus of claim 13, further comprising a chamber, said spray device being disposed within said chamber, said vapor supply device being configured for feeding said at least one of a back-moistening medium and a moistening medium into said chamber.

15. The apparatus of claim 14, wherein said spray device comprises a two-substance spray device configured for spraying the coating medium by use of said at least one of a back-moistening medium and a moistening medium.

16. The apparatus of claim 15, wherein said two-substance spray device comprises an internal mixing two-substance spray device.

17. The apparatus of claim 15, wherein said two-substance spray device comprises an external mixing two-substance spray device.

18. The apparatus of claim 13, wherein said spray device comprises a rotary spray device.

19. The apparatus of claim 18, wherein said at least one of a back-moistening medium and a moistening medium from said vapor supply device from said vapor supply device is configured for carrying the atomized coating medium to a moving surface having a direction of movement.

20. The apparatus of claim 19, further comprising an element associated with the moving surface, said rotary spray device and one of the moving surface and said element associated with the moving surface each being at a respective predetermined electrical potential voltage.

21. The apparatus of claim 20, further comprising a removal device disposed before said application area of said spray device relative to the direction of movement of the moving surface, said removal device being configured for using said at least one of a
5 back-moistening medium and a moistening medium to remove an air boundary layer from the moving surface.

11/11/2011 11:11:11 AM